Proposals for Strengthening the Central and Regional Medical Stores of Namibia in Support of the Scale-Up and Expansion of HIV/AIDS Programs

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Strategic Objective 4

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About RPM Plus

The Rational Pharmaceutical Management Plus (RPM Plus) Program, funded by the U.S. Agency for International Development, works in more than 20 developing countries to provide technical assistance to strengthen drug and health commodity management systems. The program offers technical guidance and assists in strategy development and program implementation both in improving the availability of health commodities—pharmaceuticals, vaccines, supplies, and basic medical equipment—of assured quality for maternal and child health, HIV/AIDS, infectious diseases, and family planning and in promoting the appropriate use of health commodities in the public and private sectors.

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CONTENTS

ACRONYMS

A&D	assembly and dispatch
ART	antiretroviral therapy
ARV	antiretroviral
CMC	CMS Management Committee
CMS	Central Medical Store
CSU	Customer Service Unit
FEFO	first-expired, first-out
FIFO	first-in, first-out
FY	fiscal year
GRN	Goods Receipt Note
GRV	Goods Received Voucher
ITN-1, ITN-2	internal transfer note
LAN	local area network
MoHSS	Ministry of Health and Social Services
MSH	Management Sciences for Health
NAD	Namibian dollars
PMTCT	prevention of mother-to-child transmission
PTS	Procurement and Tenders Section
QSL	Quality Surveillance Laboratory
RHO	regional health office
RMS	Regional Medical Store
RPM Plus	Rational Pharmaceutical Management Plus [Program]
USAID	U.S. Agency for International Development
VEN	vital, essential, nonessential

BACKGROUND

Introduction

The efficient functioning of the public pharmaceutical management system of Namibia, one of the central support systems, is critical to the success of the Ministry of Health and Social Services (MoHSS) planned scale-up of HIV/AIDS activities. Challenges in pharmaceutical management in Namibia include the lack of personnel, unclear organizational and management structures and procedures, inadequate inventory-control management systems, and inadequate dispatch and distribution systems. All these may result in an inability of the supply system to accommodate the increased load envisaged under the plan to scale up and expand HIV/AIDS activities under the MoHSS.

Within the Namibian society, the Central Medical Store (CMS) is one of the largest organizations, and it has a tremendous potential of being a leading social partner to Namibian society, in particular for health care services and even as an educational referral center for pharmaceutical interns. This technical and logistical organization could fulfill an exemplary role. Available potential at CMS is far from what has currently unfolded. CMS is very important to the national health care services and programs, and to many health interventions it is basically a lifeline. This importance should be reflected in its status and investments in its capacity development and building.

Currently CMS can at best be described as an organization of low esteem, struggling to meet the demand placed upon it, and within the MoHSS, it plays a merely logistic role. CMS has little operational freedom and ambition, and the staff and people have to make do with very little means. It is an organization whose staff complement is not in conformity with the demands placed upon it.

This proposal seeks to propose an intervention strategy which aims at strengthening the operational capacity of the CMS and the Regional Medical Stores (RMS) of Namibia.

Summary of Previous CMS Assessments and Recommendations

A history of chronic shortages of essential medicines prompted Namibia's MoHSS to commission a number of assessments of the CMS over several years in an effort to develop a strategy to improve the management of the country's medicines and health supplies.

The CMS has been operating under the traditional central medical stores model, in which the government owns the entire pharmaceutical supply operation and handles the financing, procurement, supply, and distribution of medicines and commodities to public health facilities. The assessments and recommendations that were carried out weighed alternative supply system options, including maintaining the status quo or developing an autonomous supply agency, direct delivery system, prime vendor system, or a fully privatized supply.

The Schürmann Report

In a 1997 report for the MoHSS, [1] the Essential Drugs Programme Advisor for the Namibia Integrated Health Program focused on human resources, inventory management, and financial management as the areas constraining the CMS operations and made the following points.

- *Human Resources*: CMS staff did not have the necessary skills to carry out their tasks. The lack of an accountant on staff meant that nobody had the expertise necessary to oversee the financial operations. Onerous administrative procedures and a lack of team spirit led to poor motivation.

- *Inventory Management*: An outdated computerized inventory system and cumulative errors in data entry resulted in completely unreliable inventory records.

- *Financial Management*: The Trade Account for CMS, which was overseen by the Ministry of Finance, was not accessible to CMS managers, who remained uninformed about balances and payments and had no way to recover cost increases from customers. Consequently, CMS operated at a constant deficit.

- *Recommendations*: The Schürmann proposal suggested establishing a (semi)-autonomous supply agency that would be the sole purchasing and supply agency for government health institutions. An executive board would oversee a council, rather than a single director, that managed the day-to-day operations of three departments: finance and administration, warehousing and distribution, and transportation and marketing. Operational costs would be included in the selling prices of the medicines and supplies, but prices had to be kept below private-sector prices.

The McLoughlin and Matswetu Report

A major CMS assessment, published in November 1997, was funded by the European Union as part of the Namibia Integrated Health Program.[2] This assessment, too, focused on human resources, inventory management, and financial management as areas needing significant improvement. Overall, the report pointed out that the CMS would see significant benefits from gaining greater autonomy over their staffing, funding, and information systems. It made the following points.

- *Human Resources:* CMS staffing was seen as a major problem, with high management turnover and staff members working in areas in which they were not trained.

- *Inventory Management:* This report also noted that the CMS was constrained by an outdated computer system and data entry errors, resulting in erratic data used to calculate orders. Poor communication between the CMS and other controlling government

[1] Schürmann, M. 1997. *Improving Effectiveness and Efficiency of Services Provided by Central Medical Stores: A Review of Recent Experiences.* Windhoek: Pharmaceutical Services Division, MoHSS,Government of Namibia.
[2] McLoughlin, B., and G. Matswetu. 1997. *Central Medical Stores Analysis and Strategies.* Consultant report. Windhoek: MoHSS, Government of Namibia.

departments meant that the CMS pharmacists did not know the availability of medicines or the status of outstanding orders.

- *Financial Management:* The Ministry of Finance supervised the CMS Trade Account, but the assessment found that the ledger was months out of date. The accounting of various costs were spread over multiple government departments, and because of the lack of transparency, assessing the CMS's financial efficiency was difficult. To recover costs, the assessors recommended that the CMS sell medicines and supplies using a single price per item based on a cost-plus margin formula.

- *Recommendations:* The McLoughlin and Matswetu assessment recommended that the CMS be converted into an autonomous supply agency operating under a performance contract overseen by the government. It further recommended the development of an interim management team and workplan to address as many weaknesses as possible within the current structure and with existing resources, with a goal of transitioning the CMS into an autonomous entity. During the transition, a set of operational management indicators would be developed that would form the basis for the future performance contract.

The Tempo Consult Report

The next assessment was published in 1999[3] and was also funded by the Namibian Integrated Health Project. This report also pointed out the relative weakness of the CMS within the government organizational structure, resulting in too many levels involved in simple decisions and routine operations. It also noted that previous initiatives for change within the CMS had been instigated by outside sources, so without strong staff involvement, sustainability was weak. It made the following points.

- *Human Resources:* CMS management staff had little power and the lines of communication and reporting for the CMS were too long. A lack of monthly reporting had the consequence of no accountability, and a shortage of skills and few opportunities for staff development were additional problems. CMS operational staff had not been involved with CMS planning activities, which did not help create common objectives or build trust. In general, the assessors felt that the situation since the last assessment had improved little.

- *Inventory Management:* The CMS carried a large amount of stock that was costly to maintain. The staff's difficulty counting and keeping track of the stock resulted in inconsistencies between what was on the shelf, versus the stock card, versus the computerized records. Reducing the stock levels, training the staff, and reconciling inventories four times a year instead of just once was recommended to help improve the procurement and supplier management.

[3]Tempo Consult cc. 1999. *Central Medical Store 1998 Interim Management: Search for Turning the Central Medical Store into an Efficient Organisation.* Consultant report. Windhoek: Government of Namibia.

- *Financial Management:* At the time of this assessment (1998), CMS still had not taken over its own financial management, partly because staff capacity was lacking. The same problems due to a lack of transparency existed, with the CMS having little idea of operational costs or available funds. Again, the assignment of an accountant to the CMS was advised to help develop financial capabilities.

- *Recommendations*: The Tempo Consultancy report's overall recommendation was to increase the operational independence of the CMS, giving it more control over its own actions and decisions. This proposal would include the appointment of a CMS manager with full operational oversight. In an effort to build a sense of teamwork and morale, the report encouraged the involvement of all levels of staff in planning and the creation of training opportunities as an incentive for personal growth. Monthly progress reports with management indicators were identified as a key way to improve staff accountability at all levels.

The Pharmaceutical Services Division Proposal

A proposal in 2002 by the Pharmaceutical Services Division of the MoHSS[4] concluded that previous recommendations had had little impact on improving CMS efficiency. The report identified the same areas of concern, including inadequate staff with low skill levels and poor staff management systems; inefficient procurement, inventory management, and distribution systems; ineffective financial and accounting capabilities; and a lack of appropriately trained staff in information technology. The assessment also identified problem areas as being structural and environmental—that is, related to both CMS's place within the government's organizational hierarchy and with the management operations within CMS. This report also recommended that a move from the classic medical stores model to an autonomous supply agency (parastatal) model would be the best opportunity for the CMS to enhance its effectiveness and efficiency.

Common Ground

In general, the series of assessments summarized here came to similar conclusions about the major issues that were constraining improvements to CMS operations. Furthermore, the recommendations all rejected the status quo of continuing the classic CMS supply model, and most suggested transitioning to an autonomous supply agency system, though details differed on actual proposed changes to the CMS organizational structure. The overriding recommendation was that to improve the CMS operations, its status must be elevated within the MoHSS, and the staff must be given more authority over their own activities and budgets. However, though these assessments identified some of the overarching organizational issues that needed to be addressed, many areas important to pharmaceutical management were not covered, including quality assurance, physical storage space and storage capabilities, staff vacancies at all levels, and the integration of two RMS.

Though the assessments identified various problems and made recommendations for improvements, little progress has been made in moving any of the proposals forward. A new

[4] Pharmaceutical Services Division, MoHSS. Government of Namibia. 2002. *Proposal for Improving the Effectiveness and Efficiency of the Central Medical Stores.* Windhoek: MoHSS, Government of Namibia.

sense of urgency exists now that the Government of Namibia is working with various international organizations to scale up its HIV/AIDS programs nationwide. The success of this expansion will rely heavily on a well-functioning pharmaceutical supply system, which increases the importance of implementing a strategy to improve CMS operations.

RPM Plus Assessment

The Rational Pharmaceutical Management Plus (RPM Plus) Program of Management Sciences for Health (MSH) has received funds from the U.S. Agency for International Development (USAID)/Namibia under the President's Emergency Plan for AIDS Relief to assist the MoHSS in assessing the capacity of the Government of Namibia to meet pharmaceutical management needs in support of expansion of HIV/AIDS programs. RPM Plus conducted this indicator-based assessment in October and November of 2003.

The objective of the assessment was to identify constraints and challenges, from a health-commodity management perspective, related to introducing or expanding access to antiretroviral (ARV) medicines and propose options for improvements. A further objective was to determine the pharmaceutical management capacity to support the scale-up and expansion of the prevention of mother-to-child transmission (PMTCT) and antiretroviral therapy (ART) programs and recommendations for improvements were made.

The assessment focused on infrastructure for pharmaceutical care activities, staffing, training, selection, quantification, ordering systems, rational medicine use, management support systems, availability and management of condoms, voluntary counseling and testing, PMTCT, and ART. It involved detailed reviews of operations at the CMS, Oshakati RMS, Rundu RMS, and 12 health facilities selected on the basis of the fact that they were PMTCT pilot sites and would be providing ART and PMTCT treatment and care. The findings and recommendations of the assessments were presented to the management of MoHSS, which endorsed the implementation of a comprehensive program to strengthen the pharmaceutical sector based on the recommendations. A summary of the findings of the assessment as it relates to the CMS and RMS is presented in the following sections.[5]

Central Medical Store

The CMS in Windhoek began operations in 1960 (under the Department of Health of South Africa) and functions as a unit within the MoHSS. The CMS is located at Voigts Street in the south industrial area of Windhoek, in offices and warehouses that were refurbished in September 2002. The CMS procures, stores, and distributes more than 600 medicines listed in the national essential medicines list, including ARVs, medicines for treating and preventing opportunistic infections, and medicines used for the PMTCT program. It does the same for more than 800 medical supply items. Items are distributed to two RMS, one in Oshakati in the northwest and the other in Rundu in the northeast. The CMS also makes direct supplies to 46 hospitals, health

[5] Aboagye-Nyame, F., L. Akhlaghi, and V. Dias. 2004. *Assessment of the Public Sector Pharmaceutical Supply System of Namibia, November 2003.* Submitted to the U.S. Agency for International Development by the Rational Pharmaceutical Management Plus Program. Arlington, VA: Management Sciences for Health.

centers, and clinics situated in the Windhoek area, and other facilities in the country, such as Oshakati Hospital and Katima Mulilo Hospital.

Procurement

CMS has limited capacity to conduct reliable quantification, primarily because of unreliable information on stock balances and inventory management parameters. No formal pharmaceutical management information system exists; hence data on consumption of pharmaceuticals and actual requirements of the regions are not routinely collected and monitored by CMS and, therefore, are not used as a basis for the quantification of needs.

CMS conducts a number of international tenders for different product categories as well as local tenders and direct procurements, and these activities result in a heavy workload for the already understaffed CMS. The tender process is fully localized within the MoHSS without the involvement of the tender board of the Ministry of Finance, except for representation of the tender board on the CMS procurement committee, as is required for other ministries. This structure shortens the procurement processing time and allows the MoHSS internal control of the process.
Current tender processing procedures are extremely cumbersome and tedious; they require revision and an appropriate computerized tender management package should be developed to ensure accuracy and speed. Procurement guidelines, donation guidelines, and standard tender documents do exist; however, they require review to further promote transparency and allow for effective competition. Tender and contract conditions need to be revised to promote participation from more competitive suppliers.

Receiving Goods

The Procurement and Tenders Pharmacist is also responsible for receiving supplies at CMS, even though assigning this responsibility to the post may not be advisable because doing so does not allow effective separation of responsibilities. Supplies arrive at the receiving section of CMS and are inspected to ensure conformity to the Purchase Order, quantity ordered, expiry date, and physical conditions. When the supply is from a new supplier, samples are taken for analysis by the Quality Surveillance Laboratory (QSL). The details of the receipt are then entered into SYSPRO, the computerized inventory control system used by the CMS. At this point the Goods Receipt Note (GRN), which was printed at the time the Purchase Order was produced, is manually filled in and signed by the receiving officer. SYSPRO then treats the goods as awaiting inspection until the relevant warehouse clerk inspects the goods and enters an acknowledgment in SYSPRO. A Goods Received Voucher (GRV) is then printed for each individual item, and the stock records in SYSPRO are updated. After the checking procedure has been completed and relevant signatures obtained, a full set of documents—consisting of the Purchase Order, Customer Invoice, and the GRN and GRV—is forwarded to the accounts section at CMS for processing for payment.

SYSPRO produces Purchase Orders for each individual product and not for a group of products awarded to a supplier. Similarly, GRNs and GRVs are raised for individual products and not for

a group of products delivered by a supplier. These practices have significantly increased the amount of paperwork and the need for signing numerous documents.

Quality Assurance

Various quality assurance procedures are used by the CMS, such as (1) making visits to all new medicine manufacturers, including those based in Asia and Europe, to conduct Good Manufacturing Practices audits in collaboration with the Medicines Control and Inspections Subdivision and the QSL; (2) testing of medicine samples submitted by new suppliers; and (3) post-purchase medicine testing prior to acceptance of consignment. Quality control tests are conducted by the QSL, which is located on the premises of the CMS. During fiscal year (FY) 2002–03, 63 batches of pharmaceuticals procured by the CMS were tested at the QSL, of which 13, or 20 percent, did not meet specifications.

Distribution Methods

Namibia operates a classic central medical store distribution system with a CMS at Windhoek and two regional stores, located in Oshakati in the northwest and Rundu in the northeast. The CMS covers middle and southern Namibia directly. Administratively, the RMS are under their various regional health offices (RHOs) and do not have any direct technical or administrative links with the CMS. The relationship between the CMS and the RMS is one of client to customer. The CMS distributes supplies to the two RMS, all district hospitals, and the two local hospitals and clinics in the Khomas Highland and other surrounding regions. RMS and district hospitals, in turn, are responsible for distribution to other facilities within their jurisdiction.

Facilities are expected to order products from CMS every six weeks, and it usually takes CMS about four weeks to process and deliver the order. Intermittent orders may also be placed by facilities. No effective systems are available for deciding when, what, and how much to order at the RMS and health facilities; thus most facilities place numerous emergency or intermittent orders within the six-week order period. This practice places a heavy burden on the CMS. Inventory control policies and procedures will need to be reviewed and strengthened.

CMS maintains its own fleet of trucks, which were reported to be aged and not suitable for the volume of distribution conducted. An in-depth analysis of the transport needs of the system to support the proposed revised inventory control systems needs be undertaken and recommendations made.

Stock records are not adequately maintained at any level of the system. In one RMS, stock records had not been updated for more than two months. At the CMS, physical inventory counts and stock record figures do not correspond; only 34 percent of records corresponded with physical counts. The medical stores have no systems for stock rotation.

Storage Space

The CMS warehouse was completely refurbished in August 2002 and currently covers a floor area of approximately 1,500 square meters for pharmaceuticals and medical supplies. The key storage areas of CMS are as follows—

- Seven separate air-conditioned storerooms with independent temperature controls for medicine storage
- Three separate storerooms for storing medical supplies
- Two separate areas for receiving and dispatching medicines
- Four walk-in cold rooms and freezers

The condition of the physical infrastructure of the store is good; however, the store can hold only two months' of stock, which is inadequate if buffer stocks have to be maintained to ensure continuous supply of pharmaceuticals. An assessment of space requirements of the CMS can be accurately made only after the supply management system has been strengthened to determine the actual stock-holdings that the CMS requires and the space needed for their accommodation.

The storerooms are managed by clerks who have not received any recent training in medicine management. The lack of trained staff and inadequate storage space make following good store-keeping practices difficult for CMS, leading to improper stacking of pharmaceuticals, difficulty in accessing stocks, lack of methods for identifying location of products, and failure to practice first-expiry, first-out (FEFO). The failure to follow good store-keeping practices may lead to losses caused by expiry, pilferage, and spoilage.

Inventory Management

SYSPRO 6.0, the computerized inventory management system used by the CMS, was installed by Intelliware, a South African company, in January 2001. SYSPRO is used for managing inventory management functions and maintaining information on issues, receipts, stock balances, and stock on order. SYSPRO is also used for generating picking lists and customer invoices. In addition to carrying out these routine transactions, the program is also capable of producing reports that assist CMS managers with identification of products that need to be ordered, how much to order, and so forth. Unfortunately, SYSPRO is not used to its full capacity, and many tasks that could be done by the system are done manually or with spreadsheets. In addition to SYSPRO, CMS uses stock cards to manually record information on issues, receipts, and stock balances.

The majority of senior CMS staff who were initially trained in the use of SYSPRO in 2001 have left the public service, and management personnel who should be using the full potential of SYSPRO in their routine work lack the ability to use the full functionality of the system and have no time to acquire further skills because they are "bogged down in routine work."

Analysis of the current inventory management system at CMS suggests an urgent need for strengthening of the systems and procedures used for quantifying medicine needs, inventory management, and related functions at CMS.

Human Resources

The human resources situation for pharmaceutical management in Namibia is critical. Most vital positions in the pharmaceutical sector are either vacant or have officials serving in acting capacities in addition to carrying on their primary responsibilities. The Chief Pharmacist position and the Procurement and Tenders Pharmacist position are currently filled by foreigners on two-year contracts.

At the time of assessment, the CMS had 44 staff members. The Chief Pharmacist of the CMS reports to the Deputy Director of the Pharmaceutical Services Division at the MoHSS, who in turn reports to the Director of the Tertiary Health Care and Clinical Support Services Directorate. The position of Chief Pharmacist of CMS, like many other key positions in the pharmacy sector, had been vacant for a while and was filled in October 2003, through the promotion of the incumbent Distribution Pharmacist, thus causing that position to be vacant at the time of the assessment. The high level of vacancies and staff turnover causes many operational problems and leads to heavy workloads for some CMS staff.

Medicine Financing and Financial Management

The Ministry of Finance established a "Trade Account" for the MoHSS as a tool for ensuring continuous availability of medicines in the public sector. The average annual turnover of the CMS is about 90 million Namibian dollars (NAD). The CMS does not directly recover the cost of supplies procured and supplied through the system. Supplies are issued to facilities against allocated budgets of the various health facilities. Information on supplies is then provided to the Finance Division of the MoHSS, which debits the institution's account to cover the costs of supplies delivered to it. CMS does not apply a markup to items supplied to institutions but simply issues at cost. The Trade Account has not been appropriately managed in the past, leading to a number of problems, including a lack of accurate information on the status of the account and an accumulation of a large deficit. Financial management practices and the accounting function at the CMS need to be improved.

In FY 2002–03, total procurement of medicines and supplies at CMS was about NAD 95 million, with donations amounting to about NAD 4 million, consisting mainly of condoms donated by USAID/Namibia. Total operating cost of CMS as a percentage of total issues for FY 2002–2003 was 5.8 percent, and 13.4 percent of average inventory; total value of inventory losses as a percentage of issues is 6.7 percent, and 15.3 percent of average inventory. Stock shortages seem to be a major problem at the CMS, forming 90 percent of total inventory losses. Expired stock was only 0.5 percent of total issues.

Oshakati Regional Medical Store

Oshakati RMS, which is about 720 kilometers from Windhoek in northwest Namibia, was located on the premises of the Oshakati District Hospital until October 2003, when it moved into a newly refurbished old army warehouse, also in Oshakati. Before August 2003, the Oshakati RMS operated under the CMS, but it is now administratively under the RHO. The RMS has no budget of its own and operates with funds from the Oshakati RHO budget. According to the Pharmacist-in-charge of the RMS, the other three regions do not contribute toward the RMS budget even though their facilities are served by the RMS. The key reasons for this change in administrative structure were not very clear to the assessment team.

The Oshakati RMS serves four regions—Oshikoto, Oshana, Omusati, and Ohangwena—whose population is about 40 percent of the total national population. The Oshakati RMS serves eight hospitals and 52 health centers and clinics. However, Tsumeb and Oshakati Hospitals do not patronize the Oshakati RMS, obtaining their needs directly from CMS in Windhoek. These two hospitals' requirements may equal about 50 percent of supplies provided by RMS to the 60 facilities currently served. The reasons the two hospitals do not patronize the Oshakati RMS were not clear; however, they may relate to past nonperformance of the Oshakati RMS.

Inventory Management

The Oshakati RMS does not maintain up-to-date records on medicine receipts, issues, and stock balances, nor is a computerized inventory management system in place. The Pharmacist-in-charge explained that the original plan was to install the same system in use at CMS in the two RMS; however, when the RMS were administratively placed under the regions, this plan was not implemented. The Pharmacist-in-charge had developed a FoxPro-based invoicing system that was used to bill clients, but it was not functioning at the time of the assessment.

An examination of available stock records showed that they were not properly maintained before moving to the new premises. The RMS does not raise GRNs for supplies received from CMS. Lack of up-to-date and accurate stock records is indeed a serious problem for an RMS that serves nearly 40 percent of the population of Namibia. Because of this lack of proper records, the assessment team was not able to obtain measures for the selected pharmaceutical management indicators.

There are no established systems for quantification of requirements because there are no records to establish reliable data on estimated monthly consumption for individual products. Some minimum and maximum stock levels, ostensibly corresponding to two and four months' usage, are available; however, these have not been updated for five years and, thus, serve no useful purpose.

Formal orders representing about four months' requirements are placed with CMS once every six weeks, which works out to approximately nine orders per year. In addition, a number of emergency orders are placed between the formal orders. Because of a combination of poor quantification and poor inventory management practices, these emergency orders have become a regular feature. The Oshakati RMS cannot depend on the accuracy of stock records; hence, stock

balances of all items requiring reordering have to be verified through physical stock counts before placing orders with CMS. This procedure consumes valuable resources at a time when the Oshakati RMS lacks qualified and experienced staff.

Distribution

Approximately 90 percent of supplies are delivered by the Oshakati RMS to health facilities, and the remaining 10 percent is collected by the facilities. The Oshakati RMS uses three delivery routes for distribution of medicines to the health facilities. The farthest user unit served by the RMS is situated 200 kilometers from Oshakati, and the turnaround time for serving this point is one day. Supply cycles have been set for individual facilities. Hospitals are expected to place orders twice a month, and other facilities such as clinics and health centers are expected to place orders once a month. The RMS is expected to have supplies ready for dispatch within seven days of receiving an order from a user unit. At the time of delivery, an invoice, the order book, and a dispatch note are expected to be delivered with the supplies to user units. To simplify the ordering process and forestall the situation in which order books are not returned by the medical store, some facilities served by Oshakati RMS do not use the order book but rather use a duplicate book in which they write their orders and submit the original to the store for services.

Oshakati RMS uses three trucks (1, 5, and 16 tons) for distributing as well as picking up supplies from CMS in Windhoek when required. The ages of these vehicles range from 7 to 15 years and their maintenance costs are relatively high. The Pharmacist-in-charge indicated that at least one 10-ton truck is urgently needed for distribution as well as another 4×4 pickup truck for undertaking supervisory visits.

Human Resources

Of 27 approved positions, 23 are currently filled. Of these, the important positions of Principal Pharmacist, Senior Pharmacist, and Pharmacist's Assistant are all vacant, which has created a serious human resource capacity problem at the RMS. Therefore, immediate steps are warranted to fill the vacant positions and to provide system-specific training on all aspects of pharmaceutical management to new and existing staff for motivating them to be more productive.

Rundu Regional Medical Store

The Rundu RMS is situated 700 kilometers from Windhoek in the northeastern part of Namibia, close to the Angolan border. The Rundu RMS moved into the present new facility in June 2002. As is the case of Oshakati RMS, Rundu RMS also functioned under the CMS until 2002, when administrative control of the store was transferred to the RHO. The RMS has no budget of its own and operates with funds released from the Rundu RHO budget.

The Rundu RMS serves two regions, Caprivi and Kavango. The RMS provides normal supplies to one hospital and 31 health centers and clinics and emergency supplies to five hospitals.

Inventory Management

In contrast to the RMS at Oshakati, stock records at Rundu were very well maintained. Of 34 tracer medicines, stock records relating to 13 medicines, or 57 percent, exactly corresponded with a count of physical inventory. Average percentage of a set of unexpired tracer medicines available in stock at the time the RMS was visited was 100 percent.

Formal orders ostensibly representing about four months' needs are placed with CMS once every six weeks, which works out to approximately nine orders per year. In addition, a number of emergency orders are placed between formal orders. This situation could be overcome by strengthening quantification and inventory management systems.

Distribution

Approximately 30 percent of supplies are delivered by the RMS, and the remaining 70 percent is collected by health facilities. Because the RMS has only one 10-ton truck for distribution and some approach roads leading to health facilities are poor, most medicines are collected from Rundu RMS. The RMS uses two delivery routes for distribution. The farthest user unit served by the RMS is located 250 kilometers from Rundu, and the turnaround time for serving this point is one day. Supply cycles have been set for individual facilities. Hospitals are expected to place orders once in three weeks, and other facilities such as clinics and health centers are expected to place orders once a week. The Rundu RMS is expected to have supplies ready for dispatch within seven days of receiving an order from a user unit. At the time of delivery, the order book and a delivery note are expected to be forwarded with supplies to user units. Hospitals are invoiced once in three months. In the case of the Lutheran hospital and the two Catholic hospitals, checks are forwarded to RMS against supplies.

The Rundu RMS has only one 10-ton truck for distributing as well as picking up supplies from Windhoek when required. This truck is more than 10 years old and is available only about 50 percent of the time because of downtime for maintenance and repair.

Human Resources

Of 13 approved positions, 12 are currently filled. The vacant position of Pharmacist urgently needs to be filled. In addition, the Pharmacist-in-charge expressed the need for the following additional personnel—

- Pharmacist's Assistants (2)
- Accountant (1)
- Work hands (2)

OPTIONS FOR A VIABLE PHARMACEUTICAL SUPPLY SYSTEM FOR NAMIBIA

Implementation of effective systems and procedures for pharmaceutical management will dramatically reduce wastage in the supply system. Developing such systems is relatively easy—more difficult is the task of ensuring that they are properly implemented, supervised, and monitored. In other words, all systems are only as good as those who operate them. Providing proper training, filling vacant positions, and motivating staff at all levels of the logistics system are important prerequisites for strengthening pharmaceutical management. This uphill task needs to be undertaken systematically. Without adequately addressing the human resource problems, planned interventions may not yield the desired results.

Five basic models for organizing a medicine supply system for government health services are available. Some of these may not necessarily apply to the Namibian situation. These models are—

- Classical central medical stores model
- Autonomous medical stores model
- Direct delivery model
- Prime vendor model
- Fully private supply model

Classical Central Medical Stores Model

This model is the traditional one for public sector medicine supply under which the Namibian CMS has operated since its inception. The government finances, procures, stores, and distributes the medicines, and manages the entire supply chain. Financing is usually from treasury allocations or revolving funds, although donors also contribute funds. The CMS model is used where the private sector is underdeveloped, and therefore, the government is obliged to do essentially all the work. Because of the inherent rigidity and consequent inefficiency of public sector and governmental institutions, many developing country CMSs have failed to meet the needs of the populations.

Autonomous Medical Stores Model

Autonomous supply agencies are often constituted as parastatals, either under a country's Ministry of Health or as independent organizations with a board of directors or trustees from several government ministries and nongovernmental organizations. Their primary client is usually the government. The basic concept is that a well-constituted board of directors or trustees will appoint qualified senior managers, who will ensure an efficient, accountable supply service. Because of its potential for improving efficiency and flexibility associated with the private sector style of management, while maintaining sufficient public sector supervision to ensure that the agencies provide high quality essential medicines at reasonable prices in public sector, many

developing countries are adopting this model, which appears to offer new opportunities and features for improving CMS performance to provide a high level of service efficiently and cost-effectively. Two major problems have been experienced by countries adopting this model: (1) unsatisfactory performance of management and (2) delay or nonpayment (or both) by government institutions for goods supplied, leading to debts and subsequently reduced availability of medicines.

Direct Delivery Model

The classic CMS and autonomous agency models involve bulk procurement and distribution from a central warehouse. The costs and logistical problems associated with central storage and distribution are substantial. One alternative is the direct delivery model, in which a government procurement office tenders to establish prices and suppliers for each item, but the suppliers deliver the medicines directly to regional stores, district stores, or health facilities rather than to one central warehouse. This model reduces the need for central storage facilities, and accompanying security arrangements, and also preserves the benefits of centralized tendering resulting in favorable prices and centrally monitored quality of products. However, higher management skills and capacity at district and facility levels to order, receive, and pay for the medicines and to monitor and manage supply contracts are required for this model to function effectively.

The efficiency of the direct delivery model depends on a well-developed private sector covering the whole country and sufficient contract and financial management skilled staff at facility level.

Prime Vendor Model

In the prime vendor model, which is a variation of direct delivery model, the public procurement office tenders for two types of contracts: (1) contracts with any number of suppliers to establish the source and price for each medicine and (2) one contract with a single prime vendor for distribution. The suppliers deliver the medicines to the prime vendor, who is responsible for maintaining sufficient stocks of medicines to fill orders from regional warehouses, district stores, and facilities. The facilities order medicines from the prime vendor, who may obtain its own vehicle fleets or subcontract for transportation.

The prime vendor is paid a fee for storage and delivery services, in industrialized countries this fee is less than 2 percent of the invoice value at tender prices. Like the direct delivery contracts, this model depends on sole-source commitment for the medicines under tender contract, although district and health facilities may be allowed to purchase non-tender medicines from other sources. This model also requires good information management and monitoring, and depends on a well-developed private sector and sufficient skilled staff at facility level.

Fully Private Supply Model

A fully private model means that all medicine supply operations are in the hands of the private sector. Often this occurs because of insufficient financing or management problems that lead the government to avoid taking on the responsibility for providing hospitals and health facilities with essential medicines. Under these circumstances patients are left to buy virtually all their own medicines from the private sector. The greatest concern with a fully private supply model is that, because the government does not have insight into the management or control over policy and pricing of supplies, this model does not ensure equity of access for the poor, medically needy, and other disadvantaged groups.

The Preferred Option

Recommendations from past assessments of the CMS (summarized earlier) all rejected the status quo of continuing the classic CMS supply model, and most suggested transitioning to an autonomous supply agency system, though details differed on actual proposed changes to the CMS organizational structure. The overriding recommendation was that to improve the CMS operations, its status must be elevated within the MoHSS and the staff must be given more authority over their own activities and budgets.

The MoHSS management has considered all the options proposed and concluded that the potential risks associated with setting up an autonomous agency to run the CMS operations—such as the possibility for misappropriation of funds and ineffective management—outweigh the potential gains of an autonomous agency. In addition, parastatals in Namibia have acquired a reputation of poor performance. The MoHSS has decided, therefore, to opt for the traditional central medical store model with strengthening of the various components and systems.[6]

[6] Dr. Norbert Forster, MoHSS. Debriefing session at MoHSS with Francis Aboagye-Nyame, RPM Plus, October 27, 2003.

PROPOSALS FOR STRENGTHENING THE NAMIBIA MEDICAL SUPPLY SYSTEM

The capacity of the MoHSS CMS must be enhanced to ensure that medicines and other commodities required for implementing the nationwide HIV/AIDS program are available and accessible in a dependable manner. Rapid expansion of the HIV/AIDS program throughout the country will create new strains on CMS management and logistics systems. U.S. government technical assistance and training will help CMS meet this new challenge effectively.
The President's Emergency Plan for AIDS Relief strategy for Namibia, proposes to provide support to MoHSS for strengthening of the pharmaceutical management system in support of the scale-up and expansion of HIV/AIDS programs. This effort will include the strengthening of the CMS system of Namibia through a number of interventions that will be implemented over the medium term.

RPM Plus staff and consultants will provide technical assistance and leadership in the delivery of the strategy, and the MoHSS will implement the activities. The goals of the intervention are (1) to improve the systems for the procurement, storage, and distribution of pharmaceuticals, rapid test kits, nutrition packages, and home-based care kits as may be required; (2) to improve the financial management practices in place for pharmaceuticals at the CMS, RMS, and treatment facilities; and (3) to ensure availability and traceability of supplies for the lowest possible cost. Expected results include the following—

- Strengthened quantification and forecasting systems at all levels
- Strengthened institutional capacity for procurement
- Strengthened inventory control and management systems in the CMS and RMS
- Infrastructure and equipment needs of the CMS and RMS identified and provided
- Established responsive and efficient scheduled delivery system at the CMS and RMS
- Enhanced financial management system for pharmaceutical supplies

The interventions proposed will be delivered through a variety of methods including the following—

- Providing technical assistance and support for the development and implementation of appropriate systems for quantification of needs at all levels

- Providing technical assistance and support for the strengthening of policies, procedures, guidelines, and systems for procurement and improving the skills and knowledge of personnel involved in procurement

- Providing technical assistance and support for the review and strengthening of inventory control policies, procedures, guidelines, standard operating procedures, and job aids and for improving the skills and knowledge of CMS and RMS personnel in the upgraded inventory management system

- Upgrading and providing required additional modules for the computerized inventory control system in the CMS (SYSPRO) and roll out of the modules to the RMS; repairing or providing computer hardware, office equipment, and software to enhance the operations of the various medical stores

- Providing technical assistance and support for the enhancement of physical security of goods in storage and in transit

- Reviewing and making recommendations for modification or repair of existing storage infrastructure and, as appropriate, supporting the repair or provision of handling and storage equipment and infrastructure upgrades

- Providing technical assistance and support for the review and strengthening of ordering systems between treatment facilities and medical stores and of the order processing and dispatch systems of the CMS and RMS; developing an efficient scheduled delivery system

- Providing technical assistance and, as appropriate, support for the review and strengthening of transport and fleet management systems of the CMS and RMS

- Providing technical assistance and support for the development of a procurement and logistics system for rapid test kits

- Providing support for an evaluation of the financial management system of the CMS and the Trade Account, as well as for the development and implementation of an enhanced financial management system for the CMS, RMS, and treatment facilities

- Recruiting and seconding to the MoHSS a pharmaceutical management adviser and network administrator to support the operations of the CMS and RMS

Organization and Management of CMS

Organizational Structure

To ensure efficient management of the CMS, a revised organizational structure, presented in Figure 1 below, is proposed for the CMS. The structure proposes to place receiving functions under the Distribution Section instead of the Procurement and Tenders Section (PTS). A Customer Service Unit (CSU) has been introduced to provide public relations and customer service support to clients of the CMS. The CSU will also serve as the secretariat of the CMS to assist the office of the Chief Pharmacist and other management level personnel with secretarial and office administration functions.

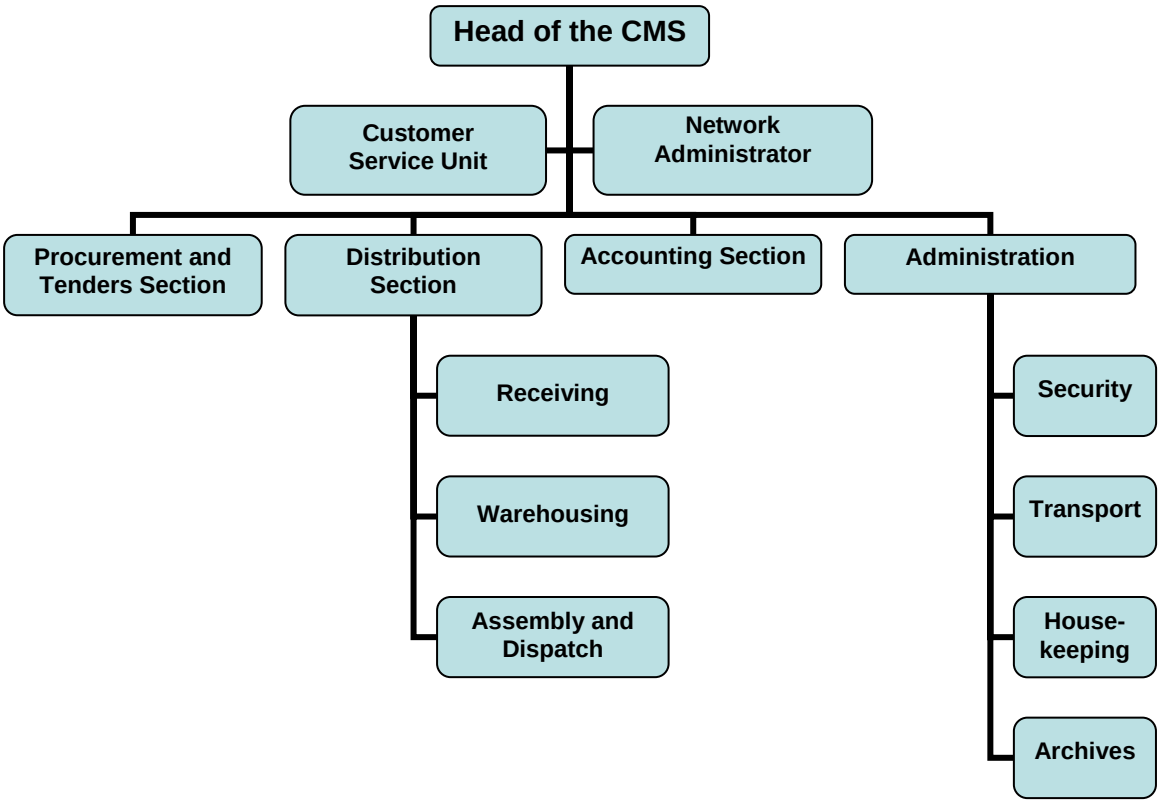

Figure 1. Proposed CMS Organizational Structure

Another proposed addition to the CMS structure is an Assembly and Dispatch (A&D) Bay. This unit will be responsible for assembling items picked from the various warehouses and packing them into appropriate transit boxes. The unit will also ensure appropriate labeling of the outer packages, and dispatching the consignment with the required documentation. Detailed position descriptions and required competencies for the various positions in the revised organigram will be developed. A training needs assessment will be conducted, and required training will be provided for individuals as needed.

Proposed Functions of the Sections of the CMS

CMS Management Committee

A CMS Management Committee (CMC) composed of heads of the various sections of the CMS is proposed (Table 1). The MSH Pharmaceutical Management Advisor will be in attendance at all meetings of the CMC. The management committee will be chaired by the Head of the CMS, and the Head of the Administration Section will serve as secretary to the committee. The committee will meet monthly, and section heads will be required to report on operations within their sections at such meetings. A set of management indicators and reporting formats will be developed to facilitate this process. Minutes of the proceedings of the committee will be maintained, and copies provided to the office of the Deputy Director of the Pharmaceutical Services Division.

Table 1. Proposed Membership of the CMS

Office	Position
Head, CMS	Chairman
Head, Procurement and Tenders Section	Member
Head, Distribution Section	Member
Head, Accounting Section	Member
Head, Administration	Member/secretary
Pharmaceutical Management Advisor	In attendance

Head of CMS

The Head of the CMS will be responsible for the overall management and administration of the CMS. The head will be the chief representative and team leader of the CMS staff and ensure that the CMS provides a high quality, cost-effective service to the people of Namibia by supplying pharmaceuticals and medical products to its clients according to their needs. He or she will be responsible for planning, development, and promotion of efficient operational policies and procedures, both with and through the management team, to ensure the coordination of activities between the different sections and to improve professional, operational and administrative activities as well as the personnel of the CMS. The Head of the CMS will report to the Deputy Director of Division of Pharmaceutical Services.

Procurement and Tenders Section

The PTS of the CMS will be the unit responsible for all processes relating to the procurement of pharmaceuticals and related substances in the MoHSS and for the safe custody of all records, documents, and materials related to all procurement transactions. The PTS will be responsible for executive procurement functions and will ensure that all required processes related to the management of tenders are carried out in an efficient and timely manner. The major tasks of the PTS will include—

- Maintain and update procurement procedures including Standard Tender Documents
- Develop and maintain standard lists and specifications for the various procurement portfolios
- Develop and maintain suppliers and materials specifications databases
- Quantify requirements
- Execute procurement on a national level including—
  - Preparation of Standard Tender Documents
  - Launching of tenders
  - Evaluation of tenders
  - Facilitating of logistics
  - Monitoring of contracts

- Coordinate emergency procurement, buyouts, and donations
- Process Purchase Orders
- Keep and maintain an efficient record management system for all procurement activities
- Maintain a supplier performance monitoring system
- Maintain a procurement management information and evaluation system

Distribution Section

The Distribution Section will receive, hold, and distribute commodities according to established procedures. The section is divided into three main units: the Receiving Bay, the Warehousing Unit, and the Assembly and Dispatch Bay. The Distribution Section will ensure that all pharmaceuticals and medical supplies are properly and securely stored and are distributed to the right clients at the right time, ensuring accuracy at all times. The head of the Distribution Section manages the functions of receiving, storage and warehousing, inventory control, assembly, and dispatch of pharmaceuticals and related supplies to RMS, hospitals, clinics, and other clients of the CMS. He or she provides advice on appropriate inventory management practices to avoid stock overages and shortages and to ensure that supplies are received, stored, and moved from source to user efficiently and reliably.

Receiving Bay

The Receiving Bay will be responsible for receiving goods procured by the PTS and consigned to the CMS according to established procedures. They will (1) ensure the orderly receipt of all goods coming into the CMS, (2) provide assurance that the quantity and quality of all goods received into the CMS are as ordered, and (3) disburse the goods to storage. The chief clerk in charge of the Receiving Bay will report to the Head of the Distribution Section.

Warehousing Unit

The CMS has nine warehouses for the storage of pharmaceuticals and related substances. The function of Warehousing Unit is to ensure that goods are put away appropriately and stored in a manner that conforms to international store-keeping norms and standards that maintain the quality and integrity of the goods. Goods will be stored in a manner that allows best practices in store management such as the use of FEFO and first-in, first-out (FIFO) systems. The Warehouse Unit will also be responsible for order processing according to established procedures. The clerks in charge of the various warehouses will ensure that appropriate stock records are maintained and will report to the chief clerks who in turn will report to the Head of the Distribution Section.

Assembly and Dispatch Bay

The A&D will be responsible for assembling, packing, labeling, and dispatching of goods in accordance with client orders, following established procedures. The A&D will ensure that all

goods leaving the CMS are appropriately documented and sealed. The chief clerk in charge of the A&D will report to the Head of the Distribution Section.

Accounting Section

The Accounting Section is responsible for all financial transactions of the CMS. The Accounting Section is responsible for issuing invoices and credit notes to clients as may be required. The section also processes vendor documents for payments for goods supplied. The CMS does not maintain an account; thus, all transactions are processed through the Finance Division of the MoHSS through the Trade Account. The Head of the Accounting Section will report to the Head of the CMS.

Administration Section

The Administration Section is responsible for managing general administrative functions of the CMS, including transport management, security, housekeeping, and archives, to ensure that the functions of the CMS are carried out in a healthy, safe, and professional atmosphere. The Head of the Administration Section will report to the Head of CMS.

Customer Service Unit

The CSU will be responsible for handling client queries and external relations under the direction of the Head of the CMS. The CSU will record all client calls and either answer them directly, obtain a response from the appropriate officer, or transfer the query to the appropriate officer for addressing. The CSU will also serve as receptionist and secretariat for the CMS by receiving, dispatching, and recording all correspondence of the CMS, including order books, interim orders, and dispatch documentation. The CSU will be responsible for receiving, documenting, and directing visitors appropriately. The CSU will report to the Head of the CMS.

Network Administrator

The CMS Network Administrator maintains the integrity of the local area network (LAN), manages the implementation of LAN system upgrades, and maintains the integrity of all desktop and laptop computers used by staff for the MoHSS CMS and RMS. The Network Administrator is key in helping staff use hardware, software, and peripherals appropriately; providing instruction and managing specific problems and requests; assisting in monitoring and evaluating network performance; identifying problems; devising solutions; and contributing to the design of enhancements of the current network architecture. The Network Administrator provides technical training and assistance as needed to ensure effective use of the network by staff, while maintaining the security and performance of network resources. The Network Administrator provides various reports on the inventory management system on a periodic basis to CMS management. He or she reports to the Head of the CMS in the performance of his or her duties.

Human Resources

MSH has engaged three full-time personnel for the positions of Logistics Advisor, Head of the Distribution Section, and Network Administrator, all of whom who will be seconded to the CMS for an initial period of three years. MSH also engaged and seconded to the CMS pharmacist's assistants to assist in warehouse management. Thus most of the positions in the proposed organigram have incumbents. These personnel will be based full time at the CMS and will provide technical assistance and support for the implementation of planned activities in the CMS and RMS. RPM Plus proposes that as soon as the established positions are activated, the MoHSS immediately absorb the seconded staff to ensure long-term human resource availability. In the case of positions that do not currently exist, such as Network Administrator and the Pharmacists' Assistants for the warehouses, the MoHSS should take steps to establish these positions to enhance the effectiveness of the CMS.

RPM Plus proposes the title "Work Hand" be replaced by the title "Material Handler" to better reflect the function performed. To ensure efficient use of the material handlers of the CMS, material handlers should not be permanently assigned to a section as currently prevails, but rather should be pooled for allocation to various tasks on a daily, weekly, or monthly basis, or as and when required. The management of the material handlers will be the responsibility of the Head of the Distribution Section.

CMS Operations

Inventory Management

RPM Plus will provide support for the review and development of suitable inventory management systems at CMS that are capable of maintaining a proper balance among stock-holding costs, stock-out costs, and ordering costs. Such an approach would minimize the total variable cost of operating the inventory management system at CMS. ABC value analysis, VEN (vital, essential, nonessential) analysis and expected lead times would be used to set appropriate inventory control parameters such as reorder levels, reorder quantities, and reorder intervals; maximum and minimum stock levels; and levels of buffer stocks.

Support will also be provided, in collaboration with Impact Africa, the providers of SYSPRO, for the review of the operating characteristics and capabilities of SYSPRO for inventory control, and for any system modifications needed to meet the inventory control and reporting requirements of the CMS. Additional SYSPRO modules and software will be added, as required, and necessary hardware will be provided. CMS staff should receive the necessary training to use the system appropriately.

A comprehensive set of inventory management reports for use at CMS and RMS to support management decision making, will be developed, and SYSPRO will be configured to produce these reports routinely.

Procurement

The CMS procurement policies and guidelines will be reviewed and support will be provided for the review of and amendment of CMS tender and contract conditions if needed to stimulate competition and attract new suppliers. Efforts initiated by the CMS for the development or acquisition of a tender evaluation and management software that can integrate with SYSPRO for effective and efficient management of procurement will be supported.

The CMS currently uses a postqualification tender system to establish prices and select suppliers of goods to the CMS for different periods. RPM Plus recommends that CMS change to a formal prequalification system for selection of suppliers for pharmaceuticals, since prequalification systems may afford better quality assurance in procurement. As a minimum, suppliers of ARVs to the MoHSS CMS should be selected using a prequalification system, preferably based on the World Health Organization's prequalification scheme.

CMS should procure a long-term service contract for clearing all CMS shipments through Walvis Bay and Windhoek airport, instead of seeking quotes and appointing an agent for every consignment received. This intervention would significantly reduce port clearing charges and lower the workload associated with clearing goods for procurement staff.

RPM Plus will work with Impact Africa to reconfigure SYSPRO to produce Purchase Orders and GRNs to cover all items ordered or received from a given supplier, and not one Purchase Order or GRN per item.

Forecasting and Quantification

Support will be provided for the development of systems and procedures for quantifying needs by identifying key factors influencing demand and also by using different methods depending on the type of medicine. A management information system and a tracking system for HIV/AIDS commodities will be developed to collect data on patient enrollment, regimens, and other factors to enable appropriate quantification of needs. To support this activity, RPM Plus will install and train CMS staff in Quantimed, an RPM Plus tool for quantifying HIV/AIDS commodities.

In a rapid growth environment, conventional inventory control models using maximum and minimum stock levels would be ineffective in controlling inventories of ARVs. Hence, a user-based system for periodically quantifying and ordering ARV medicines will be developed and introduced at all treatment centers. CMS would aggregate requirements received from all treatment centers and place quarterly orders with suppliers taking into account relevant lead time and buffer stock requirements.

Receiving

Responsibility for the management of the Receiving Bay should be moved from the Procurement Section to the Distribution Section. In collaboration with Impact Africa technicians, SYSPRO will be reconfigured to generate only one GRN per vendor invoice received. The GRN will be

signed by the Head of the Distribution Section to ascertain that the goods have been received in good order in accordance with the provisions of the Purchase Order.

The ability to receive quantities of goods above the quantity requested on the Purchase Order will be disabled. If a supplier delivers more than ordered, the Procurement Section must be notified, and they will then generate a new Purchase Order to cover the excess quantity, if the goods are required by the CMS. Such determination will be done in consultation with the Head of the CMS.

All pharmaceuticals received by the CMS must be sorted according to batch number, expiry date, or both to allow for lot traceability and efficient practice of FEFO and FIFO principles.

An acceptance and product sampling procedure will be developed and implemented in collaboration with the QSL.

Putaway

Following the acceptance of goods by the Receiving Bay, the designated warehouses should be notified and an internal transfer note (ITN-1) should be generated by the Receiving Bay. The ITN-1, which will serve as evidence of the change in custody of the goods between the Receiving Bay and the designated warehouse, will be duly acknowledged by both the Receiving Bay personnel and the warehouse personnel. The Receiving Bay will ensure that the ITN-1 is appropriately archived. Upon notification and before collection of goods from the Receiving Bay, the warehouse clerk will allocate a location in his or her warehouse to store the goods.

Storage and Handling

The CMS is constrained by the availability of storage space and lack of adequate handling equipment. RPM Plus will facilitate a review of the storage and infrastructure requirements and make recommendations to the MoHSS on appropriate solutions. Training will be provided for warehouse personnel to enable them conduct their work efficiently in accordance with best practices.

Order Processing

RPM Plus will provide support and technical assistance for the review and development of order processing and picking procedures that will enhance the accuracy and efficiency of the process. SYSPRO's capacity to allow remote access will be harnessed, and the possibility of implementing Web-based ordering solutions that will allow selected sites to input their orders electronically will be explored. RPM Plus further proposes that after orders have been input by the Order Entry Clerk, the Head of the Distribution Section should verify the allocations and approve the picking list before the printing of picking lists.

After items have been picked by the respective warehouse, one of the warehouse supervisors will then generate a second internal transfer note (ITN-2), essentially an amended picking list that reflects actual items picked, to accompany the transfer of the picked items from the warehouse to

the Assembly and Dispatch Bay. The ITN-2 will be acknowledged by both the warehouse clerk and the A&D personnel accepting the goods. Under no circumstances will goods be transferred to the Assembly and Dispatch Bay accompanied by the original picking slip. The warehouse clerk will ensure archiving of the ITN-2.

Assembly and Dispatch

An A&D area will be created to allow for checking, assembly, packing, sealing, and marking of packages before their dispatch to client institutions. RPM Plus will provide support for the required renovations. In collaboration with the Department of Works, appropriate structures will be designed to ensure that goods awaiting packing and dispatch are held in a secure manner.

Only items accompanied by a SYSPRO-generated ITN-2 will be accepted by the Assembly and Dispatch Bay for processing. Upon the receipt of all picked items for a particular order, the A&D personnel will pack loose items in GRN boxes prior to sealing and marking of the boxes. Each packed box will be coded for audit purposes. Only GRN boxes will be used for the transport of all loose pharmaceuticals.

Following the completion of the order, the various ITN-2s will be collated into a dispatch note to accompany the goods.

Standard Operating Procedures

RPM Plus will provide technical assistance and support for the development of standard operating procedures covering the various operations of the CMS including stock receipt, storage and handing, order processing, assembly, packing, sealing, marking, and dispatch. Training will be provided to staff in these procedures.

The various forms and documentation supporting the operations of the CMS will be reviewed and amended as appropriate.

Financial Management, Security, Transport, Funding and Implementation

Financial Management

RPM Plus will support the development and implementation of a comprehensive package of financial and management accounting systems to support recommendations made for strengthening pharmaceutical management at CMS and other user units.

Security

RPM Plus will support the review and strengthening of the security systems of the CMS and RMS to ensure the security of goods in storage and in transit. This undertaking will involve a comprehensive review of the security arrangements and recommendations made for

improvements as required. The recommendations will be discussed with relevant stakeholders, and implementation plans will be made and responsibilities determined.

Transport

RPM Plus will provide technical assistance and support for an in-depth review of the transport management practices of the CMS and the RMS in support of the proposed revised inventory management systems. This study will seek to provide options for a viable transport management system for the CMS/RMS system, which may involve private sector options. Following this review, RPM Plus will provide technical assistance for decision making and support for the implementation of the selected option.

Functional Relationship between the CMS and RMS

Currently the two RMSs operate as clients of the CMS and are managed by the Regional Health Administrations of the regions in which they are located. These RMSs have no direct functional or administrative links with the CMS. RPM Plus proposes that the RMS be made outposts or depots of CMS as they were prior to 1991. This arrangement will enhance and streamline the process of standardization of systems and procedures for inventory management, store-keeping, distribution, and related functions throughout Namibia. Physically linking the RMS to the CMS will ensure better communication and online data exchange, which is a top priority for every logistics management information system to collect data and report accurate consumption data.

Currently, both RMSs operate manual inventory management systems, and that set-up is inefficient considering the volume of transactions and the lack of accountability. RPM Plus proposes, therefore, that SYSPRO be implemented at both RMSs and the possibility of linking up all three medical stores through a network would also be explored. Required office equipment such as fax machines, photocopiers, and computer software and hardware will be provided for the RMSs to enhance their activities.

Funding

Funding for the technical assistance and support for this strategy will be provided under the President's Emergency Plan for AIDS Relief, which is administered through USAID/Namibia. The Government of the Republic of Namibia, will also provide funding support for the implementation of some aspects of the strategy. Responsibilities for funding of the various aspects of the strategy will be discussed as part of the annual planning process.

Implementation

MSH's RPM Plus Program, having been contracted by the USAID/Namibia to provide technical assistance to the MoHSS will oversee the implementation of this strategy in collaboration with the Pharmaceutical Services Division, CMS and other MoHSS and Government of the Republic of Namibia departments and personnel as may be required.